AzureWave Technologies, Inc.

AW-CM276NF

IEEE 802.11a/b/g/n/ac
WLAN Microcontroller Module

Certification Guide

Ver. A

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Revision History

Document release	Date	Modification	Initials	Approved
A	2020/05/22	Initial Version	Selene Chang	Patrick Lin

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Table of Contents

Revision History 2
Table of Contents 3
1. Certificate list of AW-CM276NF 4
2. Antenna Filing Policy 5
Appendix 1 7

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1. Certificate list of AW-CM276NF

AW-CM276NF is using NXP W8997, having CE, FCC, IC, NCC, AU/NZ, India, Japan certificates. Certificate ID are listed as below.

- **FCC ID: UAY-W8997-M1216**

  The final end product must be labeled in a visible area with the following: Contains “FCC ID: UAY-W8997-M1216”

- **IC ID: 6549A-W8997M1216**

  The final end product must be labeled in a visible area with the following: “Contains IC ID: 6549A-W8997M1216”

- **NCC ID: CCAI17LP0400T2**

  CCAI17LP0400T2

- **India: ETA-SD-20191005525**

- **AU/NZ:** R-NZ

- **Japan:**
  - TELEC: 020-170034
  - JATE: D170017020

  R 020-170034
  T D170017020

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2. Antenna Filing Policy

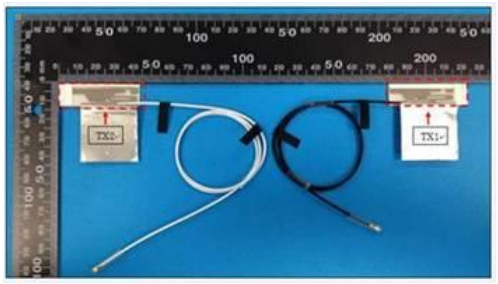
AW-CM276NF was certified with many antennas. The antenna list could be found in Appendix 1. If you have preferred antenna to be used with AW-CM276NF, antenna filing is necessary.

Before applying antenna filing, please notice that below policies

1. Antenna filing could be applied for the countries as below:

   FCC, CE, IC, NCC and Japan.

2. The below information must be included in the data sheet of new antenna
   - Antenna Vendor and Part Number
   - Antenna peak gain table
   - Antenna pattern for each band (gains listed on plots must correctly match spec sheet summary table of gains)
   - Antenna photo (including antenna length/width with L type scale) (Figure 1 or Figure 2)
   - Antenna drawing (including length/width)
   - Antenna type
   - Antenna cable length
   - Connector type
   - IPEX Cable drawing if the antenna type is dipole

Figure 1	Figure 2
	

3. Reminder about Global Antenna Rules
   - Please ensure that new antenna is PCB on board, PIFA, Dipole or Monopole type.
   - Please ensure that the peak gain of new antenna is lower than AzureWave limits as Appendix 1.
   - If new antenna has higher antenna gain value than Appendix 1, it will trigger FCC permissive change testing or re-test in the other countries.

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- If new antenna has different type from current antenna list, re-testing is necessary and charge might have to be taken by requestor

4. Schedule of antenna filing for 2020 is listed as below. If there is extra requirement in addition to the regular schedule, the charge might have to be taken by requestor. For later schedule of antenna filing, please contact with AzureWave Sales or FAE.

Submit to AzureWave	Cutoff date	Start date	Completed date
2020/01/02	2020/01/08	2020/01/22	2020/02/06
2020/03/02	2020/03/11	2020/03/25	2020/04/29
2020/05/04	2020/05/13	2020/05/27	2020/06/24
2020/07/06	2020/07/15	2020/07/29	2020/08/26
2020/09/07	2020/09/16	2020/09/30	2020/10/28
2020/10/26	2020/11/04	2020/11/18	2020/12/16

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Appendix 1

Antennas listed on FCC reports

Original								
Antenna Set.	Brand	Model	Chain No.	Antenna Net. Gain(dBi)	Frequency range (MHz)	Antenna Type	Connector Type	Cable Length
1	MAG.LAYERS	MSA-4008-25GC1-A1	Chain 0(Aux)	2.98	2400~2500	PIFA	i-pex(MHF)	15cm
				5.16	4900~5900			
			Chain 1(Main)	2.98	2400~2500			15cm
				5.16	4900~5900			
2	Bondale	G-RA0K10090176-1436B	Chain 0(Aux)	1.9	2400~2500	Dipole	RP-SMA	120mm
				3.6	4900~5800			
			Chain 1(Main)	1.9	2400~2500			120mm
				3.6	4900~5800			
3	San Jose	UEN-201	Chain 0(Aux)	2.4	2400~2500	Dipole	RP-SMA	120mm
				4.4	4900~5800			
			Chain 1(Main)	2.4	2400~2500			120mm
				4.4	4900~5800			
Newly								
Antenna Set.	Brand	Model	chain no.	Antenna Net Gain(dBi) included cable loss	Frequency range	Antenna Type	Connector Type	Cable Length
4	Unictron	H2B1PC1A1C175L	Chain 0(Aux)	1.6	2400-2500	PCB	I-pex	100±5mm
				4.8	5150~5850			
			Chain 1(Main)	1.6	2400-2500	PCB	I-pex	100±5mm
				4.8	5150~5850			
5	LSR	001-0012	Chain 0(Aux)	2	2400-2500	Dipole	RP-SMA	100mm
				2	5150~5850			
			Chain 1(Main)	2	2400-2500	Dipole	RP-SMA	100mm
				2	5150~5850			
6	Laird	MAF94051	Chain 0(Aux)	2.4	2400-2500	Dipole	RP-SMA	100mm
				3.4	5150~5850			
			Chain 1(Main)	2.4	2400-2500	Dipole	RP-SMA	100mm
				3.4	5150~5850			
7	Taoglas	GW.59.3153	Chain 0(Aux)	2.86	2400-2500	Dipole	RP-SMA	100mm
				4.74	5150~5850			
			Chain 1(Main)	2.86	2400-2500	Dipole	RP-SMA	100mm
				4.74	5150~5850			
8	Chang Hong	DA-2458-02-SMR	Chain 0(Aux)	2.85	2400-2500	Dipole	RP-SMA	100mm
				2.17	5150~5850			
			Chain 1(Main)	2.85	2400-2500	Dipole	RP-SMA	100mm
				3.13	5150~5850			
9	Unictron	H2B1PD1A1C385L	Chain 0(Aux)	2.8	2400-2500	PCB	I-pex	100mm
				4.2	5150~5850			
			Chain 1(Main)	2.8	2400-2500	PCB	I-pex	100mm
				4.2	5150~5850			
10	Molex	2042811100	Chain 0(Aux)	2.562	2400-2500	PCB	I-pex	100mm
				3.094	5150~5850			
			Chain 1(Main)	2.562	2400-2500	PCB	I-pex	100mm
				3.094	5150~5850			
11	Molex	1461531100	Chain 0(Aux)	1.829	2400-2500	PCB	I-pex	100mm
				2.485	5150~5850			
			Chain 1(Main)	1.829	2400-2500	PCB	I-pex	100mm
				2.485	5150~5850			
12	MAG.LAYERS	MSA-4008-25GC1-A2	Chain 0(Aux)	2.98	2400-2500	PIFA	i-pex(MHF)	NA
				5.16	5150~5850			
			Chain 1(Main)	2.98	2400-2500	PIFA	i-pex(MHF)	
				5.16	5150~5850			

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Antennas listed on CE reports

Antenna Set.	Brand	Model	Chain No.	Antenna Net. Gain (dBi)	Frequency Range (MHz)	Antenna Type	Connector Type
1	MAG.LAYERS	MSA-4008-25GC1-A1	Chain 0(Aux)	2.98	2400~2500	PIFA	i-pex(MHF)
				5.16	4900~5900		
			Chain 1(Main)	2.98	2400~2500		
				5.16	4900~5900		
2	Bondale	G-RA0K10090176-1436B	Chain 0(Aux)	1.9	2400~2500	Dipole	RP-SMA
				3.6	4900~5800		
			Chain 1(Main)	1.9	2400~2500		
				3.6	4900~5800		
3	San Jose	UEN-201	Chain 0(Aux)	2.4	2400~2500	Dipole	RP-SMA
				4.4	4900~5800		
			Chain 1(Main)	2.4	2400~2500		
				4.4	4900~5800		

Antenna Set.	Brand	Model	Chain No.	Antenna Net Gain (dBi) included cable loss	Frequency Range (MHz)	Antenna Type	Connector Type	Cable Length
4	Unictron	H2B1PC1A1C175L	Chain 0(Aux)	1.6	2400-2500	PCB	I-pex	100±5mm
				4.8	5150~5850			
			Chain 1(Main)	1.6	2400-2500	PCB	I-pex	100±5mm
				4.8	5150~5850			
5	LSR	001-0012	Chain 0(Aux)	2	2400-2500	Dipole	RP-SMA	100mm
				2	5150~5850			
			Chain 1(Main)	2	2400-2500	Dipole	RP-SMA	100mm
				2	5150~5850			
6	Laird	MAF94051	Chain 0(Aux)	2.4	2400-2500	Dipole	RP-SMA	100mm
				3.4	5150~5850			
			Chain 1(Main)	2.4	2400-2500	Dipole	RP-SMA	100mm
				3.4	5150~5850			
7	Taoglas	GW.59.3153	Chain 0(Aux)	2.86	2400-2500	Dipole	RP-SMA	100mm
				4.74	5150~5850			
			Chain 1(Main)	2.86	2400-2500	Dipole	RP-SMA	100mm
				4.74	5150~5850			
8	Chang Hong	DA-2458-02-SMR	Chain 0(Aux)	2.85	2400-2500	Dipole	RP-SMA	100mm
				2.17	5150~5850			
			Chain 1(Main)	2.85	2400-2500	Dipole	RP-SMA	100mm
				3.13	5150~5850			
9	Unictron	H2B1PD1A1C385L	Chain 0(Aux)	2.8	2400-2500	PCB	I-pex	100mm
				4.2	5150~5850			
			Chain 1(Main)	2.8	2400-2500	PCB	I-pex	100mm
				4.2	5150~5850			
10	Molex	2042811100	Chain 0(Aux)	2.562	2400-2500	PCB	I-pex	100mm
				3.094	5150~5850			
			Chain 1(Main)	2.562	2400-2500	PCB	I-pex	100mm
				3.094	5150~5850			
11	Molex	1461531100	Chain 0(Aux)	1.829	2400-2500	PCB	I-pex	100mm
				2.485	5150~5850			
			Chain 1(Main)	1.829	2400-2500	PCB	I-pex	100mm
				2.485	5150~5850			
12	MAG.LAYERS	MSA-4008-25GC1-A2	Chain 0(Aux)	2.98	2400-2500	PIFA	i-pex(MHF)	NA
				5.16	5150~5850			
			Chain 1(Main)	2.98	2400-2500	PIFA	i-pex(MHF)	
				5.16	5150~5850			

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